REMARKS

Claims 1-18, 20, and 22-26 are pending in this application. Claims 1, 7, 10 and 13 are independent claims. Claim 1 are amended to include recitations from claims 19 and 21. Accordingly, claims 19 and 21 have been cancelled without prejudice or disclaimer. Claims 1-6 and 10-17 were previously withdrawn from consideration and may be cancelled by the examiner upon the allowance of the claims directed to the elected invention. Newly presented claim 24 finds support at page 3, lines 41-42. Newly presented claims 25-26 find support at page 8, line 11and Examples 4-6. The amendments to the claims and newly presented claims do not introduce any new matter. Reconsideration and allowance of the present application are respectfully requested.

Claims 7, 9 and 18-22 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,098,941 to Johnson (hereinafter "Johnson"). Johnson does not render obvious claims 7, 9 and 18-22.

Johnson is directed to an integral polystyrene foam extrudate in tubular form having a density gradient decreasing from the external surfaces inwardly (please see claim 1 and abstract).

Johnson does not teach expandable pelletized thermoplastic polymer material as urged in paragraph 17 on page 5 of the Office Action. This statement is a misinterpretation of Col 5, lines 20-27 of Johnson. This paragraph describes that the foaming agent may be incorporated in to the polymer by premixing the pelletized solid thermoplastic polymer with a minor amount of an absorbent having absorbed foaming agent. The word "pelletized" clearly refers to the polymer used as pelletized raw material and not to the expandable polymer that includes the blowing agent.

Furthermore a premix of pelletized polymer and an absorbent can only be interpreted as a physical blend of two different solids in this context, since the absorbent containing the volatile liquid will appear to be a dry powder (Col 5, line 65- 66). The mixing of the premix can only be done with the molten polystyrene. In the process according to Johnson, the blowing agent-containing polystyrene melt is not cooled and pelletized to expandable polystyrene pellets

but directly extruded to a foam (Col 6, lines 9-17).

The expandable pelletized thermoplastic polymer materials according to the present invention surprisingly exhibit very little loss of blowing agent during storage, even at high filler contents. The nucleation action of the filler also permits a reduction in the content of blowing agent, based on the polymer (page 4, lines 10-12). Expansion capability is still good, even when the content of blowing agent is very low (page 12, lines 7-8). Examples 1-8 show a very little loss of pentane as blowing agent after storage for 14 days (Table 1).

Claims 8 and 23 are rejected under 35 U.S.C. § 103(a) as being obvious over Johnson (US 4,098,941) and further in view of Glück et al. (US 6,340,713) (hereinafter also referred to as "Glück") and Tung et al. (US 6,214,897) (hereinafter also referred to as "Tung"). The cited references do not render obvious claims 8 and 23. Glück and Tung do not overcome the above discussed deficiencies of Johnson with respect to rendering unpatentable the present invention.

The expandable pelletized thermoplastic polymer material according to claim 8 of the present invention is further distinct over Johnson by the expandable graphite. This has the advantage of rendering the materials flame-retardant without use of halogenated flame-retardants (page 7, lines 36 and 37).

Glück teaches expandable styrene polymers with graphite in order to produce foams comprising a low density and low thermal conductivity. In order to render the polystyrene foams flame retardant, organic, bromine compounds having a bromine content of 70% by weight or more are used as flame retardants (Col 2, lines 44 to 58).

The graphite functions as an infrared absorber to lower thermal conductivity. This graphite is different from the claimed expandable graphite which is described on page 8, lines 22 -26 and which functions as a flame retardant.

Tung teaches a foamable composition and a closed cell foam made therefrom comprising a mixed polymer composition comprising a semi-crystalline polyester composition and polycarbonate polymer (claim 1). The closed cell polyester foam is produced by extruding a blowing agent-containing mixed polymer composition through a die and directly forming a cellular

polyester foam, preferably in the form of a sheet. There is not even the slightest suggestion of an expandable pelletized polymer.

Persons skilled in the art have no motivation to combine the teaching of Glück with the teaching of Tung, since the polymer compositions as well as the process are totally different. There is also no indication in Gluck et al for a need to enhance the flammability, nor any indication in Tung that this could be achieved by selecting expandable graphite. Accordingly, the combination of Johnson. Glück and Tung is not obvious.

Furthermore, persons skilled in the art would not have predicted a synergistic effect due a combination of a filled, such as chalk, with expandable graphite for achieving an inexpensive and halogen-free flame retardancy (page 8, lines 11-13).

Newly presented claim 24 is patentable for the additional reason that no significant deterioration in the mechanical properties, such as flexural strength or compressive strength is observed in the claimed filler amount (page 3, lines 41-42) .

In view of the above, consideration and allowance are respectfully solicited.

In the event the Examiner believes an interview might serve in any way to advance the prosecution of this application, the undersigned is available at the telephone number noted below.

The Office is authorized to charge any necessary fees to Deposit Account No. 03-2775, under Order No. 12810-00267-US1 from which the undersigned is authorized to draw.

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Respectfully submitted,

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